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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,915	02/13/2001	Kenneth G. Noggle	00-003	3193

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MARY K. CAMERON, ATTORNEY
VALENITE INC.
31700 RESEARCH PARK DRIVE
P.O. BOX 9636
MADISON HEIGHTS, MI 48071-9636

[REDACTED] EXAMINER

ROSS, DANA

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3722

DATE MAILED: 08/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/782,915	NOGGLE, KENNETH G. <i>CH</i>
	Examiner	Art Unit
	Dana Ross	3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 February 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-20 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Faxing of Responses to Office Actions

1. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302 or, for responses after final rejection only, to (703) 872-9303. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Specification

2. The disclosure is objected to because of the following informalities:

Paragraph 52, lines 9 and 14, discuss the retaining device 24 of Figure 1. Figure 1 does not show reference number 24.

Paragraph 54, lines 6-12, discuss and alternative embodiment that is not shown in a referenced drawing.

Paragraph 60, line 2, states the clearance space 49 has been reduced as shown in Figure 5B. Figure 5B appears to show the clearance space increased.

Paragraph 66, line 1, discusses Figure 11. Since there were only 10 figures, this appears to be misnumbered.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 4, 6, 13, 14 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 4 recite the limitation of “said wedge device”. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation “said expansion elements” There is insufficient antecedent basis for this limitation in the claim.

Claims 13 and 14 recite the limitation “said conical wedge”. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation “said cutting tool”. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,056,484 (Mitchell et al.) in view of U.S. Pat. No. 5,391,023 (Basteck). In regards to claim 1, Mitchell teaches a pocket 13 disposed in a cutting tool body 56 with a cavity 58 with a portion contiguous with the pocket, figure 5.

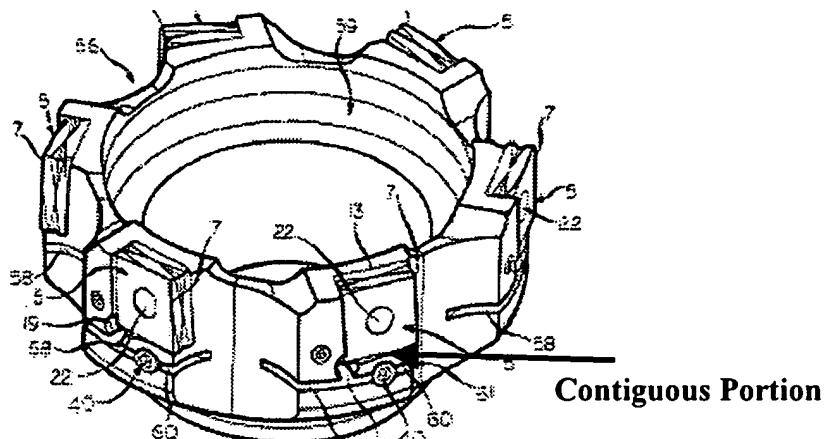


FIG. 5

Mitchell et al. also teaches an intermediate component 60 disposed within the cavity 58 with an external peripheral surface engaging the insert 5 at the contiguous portion, figure 5.

Mitchell et al. also teaches a wedging device 40 attached to the cutting tool body and engaging the intermediate component 60 such that the actuation of the wedging device 40 results in movement of the intermediate component in a direction substantially parallel to a desired direction of adjustment of the insert, column 4, lines 41-44.

Mitchell et al. does not teach the use of an expansion mechanism or the expansion of the intermediate device by actuation of the wedging device.

Basteck teaches the use of an expansion mechanism 44 that can expand by actuation of wedge device 37, column 3, lines 16-24.

In regards to claims 2, 3, 5, 6, and 7, Mitchell et al. in view of Basteck teaches all aspects of the claimed invention as described in the above rejection of claim 1. Basteck also teaches the use of an expansion mechanism 44 that comprises slots 48, column 3, lines 56-58, and a tapered portion disposed on a region of an internal peripheral surface 35 of the intermediate component, column 2, lines 63-66 and figure 2. Mitchell also teaches the use of wedge including an

adjustment screw threadingly engaged to the tool body, column 5, lines 55-59. Mitchell also teaches the intermediate component 60, defining a portion of the pocket 13 side, figure 5.

Basteck also teaches a plurality of end faces 34 on the intermediate component, figure 3, and the actuation of the wedging device 40 causes expansion of the intermediate component along the entire length of the expansion mechanism 44.

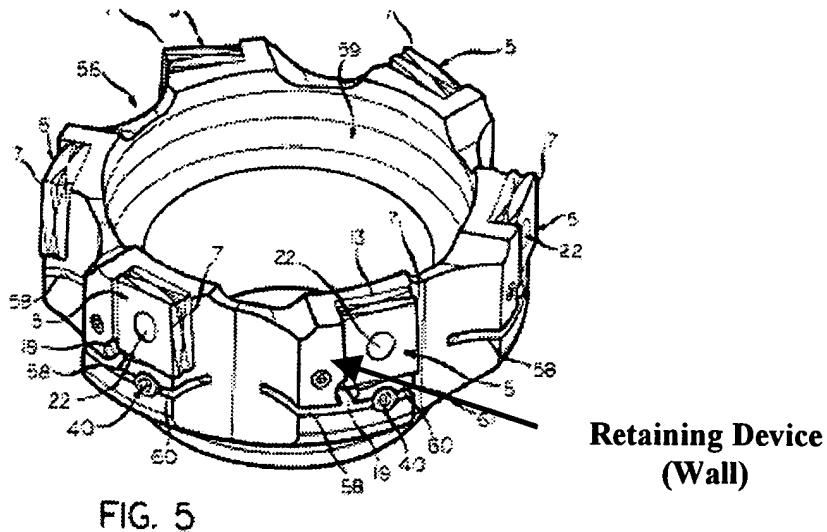
In regards to claim 4, 8, and 9, Mitchell et al. in view of Basteck teaches all aspects of the claimed invention as described in the above rejection of claim 3. Mitchell et al. also teaches the wedge 40 being conical, column 4, lines 30-31 and that the taper angle of the head 44 of the conical wedge device 40 with respect to the axis of rotation of the screw 42 is approximately between 5° and 25°, column 2, line 46. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the range of 5° and 30°, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Furthermore, applicant has not stated that the claimed range is critical to the workability of the invention.

Basteck also teaches the intermediate device comprising of an expansion mechanism 44 with a smooth cylindrical outer surface 33 and a tapered portion 35 leading out onto the end face 34, column 2, lines 64-66.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the cutting tool wedging device of Mitchell et al. for adjusting the position of cutting inserts mounted in a cutting tool, in view of Basteck's wedge expansion

mechanism for the purpose of making fine adjustments to the position of cutting inserts mounted in a cutter.

7. Claims 10-18, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,056,484 (Mitchell) in view of U.S. Pat. No. 5,391,023 (Basteck) and in view of U.S. Pat. No. 4,954,024 (Kress et al.). Mitchell et al. teaches a component 60 disposed within the cavity 58 with an external peripheral surface engaging the flank of an insert 5 contiguous with the pocket 13, figure 5. Mitchell also teaches a retaining device (wall) contiguous with the insert pocket 13, figure 5.



Mitchell et al. does not teach a sleeve disposed in the cavity, or an adjustment screw engaging the sleeve, or a retaining device inside a pocket with a floor and sides for adjustably securing the insert.

Basteck teaches the use of a sleeve 44 that can expand by actuation of an adjustment screw 37 causing expansion of the sleeve, column 3, lines 16-24. Kress teaches a retaining device 3 for adjustably securing a boring cutting plate, located in a pocket, column 3, lines 41-45, figure 2.

In regards to claims 11, 15, 16, and 18 Mitchell et al. in view of Basteck and in view of Kress teaches all aspects of the claimed invention as described in the above rejection of claim 10. Mitchell teaches the use of an adjustment screw 42 comprising a wedge that would engage the sleeve 44 of Basteck. Basteck also teaches the sleeve with slots 48 and a tapered portion 35 disposed on a first region of an internal peripheral surface of the sleeve, column 3, lines 56-58. Kress also teaches a retaining device including a clamping screw 9 threadingly engaged to the tool body for securing the tool body to the cutting blade, column 2, line 9, figure 2. Mitchell also states that the invention relates to adjusting devices for cutting tools in general, column 1, line 6. This would include rotary cutters.

In regards to claim 12, Mitchell et al. in view of Basteck and in view of Kress teaches all aspects of the claimed invention as described in the above rejection of claim 11. Mitchell et al. teaches the wedge being conical, column 4, lines 30-31.

In regards to claims 13 and 14, Mitchell et al. in view of Basteck and in view of Kress teaches all aspects of the claimed invention as described in the above rejection of claim 12. Mitchell also teaches the tapered angle of the conical wedge between about 5° and 25°, column 2, line 46. Basteck teaches the sleeve 44 including a tapered portion for engaging a side of the conical wedge, column 2, lines 63-66, figure 2.

In regards to claim 17, Mitchell et al. in view of Basteck and in view of Kress teaches all aspects of the claimed invention as described in the above rejection of claim 15. Basteck also teaches a plurality of end faces 34 on the sleeve, with each end face being intersected by at least one of the slots 48, figure 3.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the cutting tool wedging device of Mitchell for adjusting the position of cutting inserts mounted in a cutting tool, in view of Basteck's wedge expansion mechanism and the retaining device of Kress for adjustably securing the insert in two directions for the purpose of adjusting the position of the cutting edge of an insert mounted onto the body of a tool.

8. Claim 19, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,056,484 (Mitchell) in view of U.S. Pat. No. 5,391,023 (Basteck). Mitchell et al. teaches a removably attached mounting assembly for mounting an insert onto the tool body, column 2, lines 25-26, which is adjustably secured column 2, lines 29-31.

Mitchell et al. also teaches an intermediate component 60 disposed within the cavity 58 with an external peripheral surface engaging the flank of an insert 5 contiguous with the pocket 13, figure 5.

Mitchell et al. does not teach the use of an expansion mechanism or the expansion of the intermediate component 60 by actuation of the wedging device.

Basteck teaches the use of an expansion mechanism 44 and the expansion of the intermediate device 60 by actuation of the wedging device 37 substantially parallel to a desired direction of adjustment of the insert, figure 5.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the cutting tool wedging device of Mitchell for adjusting the position of cutting inserts mounted in a cutting tool, in view of Basteck's wedge expansion mechanism as taught by Basteck for the purpose of making fine adjustments to the position of cutting inserts mounted in a cutter.

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9. Claim 20, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,056,484 (Mitchell) in view of U.S. Pat. No. 5,391,023 (Basteck) and in view of U.S. Pat. No. 4,954,024 (Kress et al.) Mitchell et al. teaches the method of adjusting the position of cutting tool inserts mounted in a cutting tool including an intermediate component 60 disposed within the cavity 58 with an external peripheral surface engaging the flank of an insert 5 contiguous with the pocket 13, figure 5.

Mitchell et al. does not teach the method of using of an expansion mechanism or the expansion of the intermediate component 60 by actuation of the wedging device or the method of tightening the retaining device.

Basteck teaches the method of an expansion mechanism 44 and the method of the intermediate component 60 by actuation of the wedging device 37 thereby causing expansion of the intermediate component 60 resulting in a change of position of the insert, column 3, lines 1-10.

Kress teaches the method of tightening a retaining device to adjustably secure the insert, column 3, lines 41-53.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use the method of adjusting the position of cutting inserts mounted in a cutting tool taught by Mitchell et al., modified the wedging method to include Basteck's wedge expansion mechanism and modify the retaining device method as taught by Kress to adjustably secure the insert in the pocket and to make fine adjustments to the insert position.

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,254,319 (Maier et al.) Friction and Vertical Cutting Tool

U.S. Pat. No. 4,692,069 (Kieninger) Cutter Head

U.S. Pat. No. 5,209,610 (Arai et al.) Throwaway Milling Cutter

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is (703) 305-7764. The examiner can normally be reached on 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

dmr
August 5, 2002


A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700